

0 6 three inches = one foot

0 1 one and one-half inch = one foot

0 2 one inch = one foot

0 4 three-quarters inch = one foot

0 4 one-half inch = one foot

0 4 one-quarter inch = one foot

0 4 three-eighths inch = one foot

0 8 one-quarter inch = one foot

0 16 one-eighth inch = one foot

VAV TERMINAL HOT WATER REHEAT BOX SCHEDULE											
TAG NO.	INLET SIZE	CFM			E.A.T.	M.B.H.	A.P.D. MAX	COIL DATA			
		MAX.	MIN.					# ROWS	E.W.T.	G.P.M.	W.P.D.
VAV-1	10"	1065	800	50	50.98	.42"		2	180	6.25	5.84'
VAV-2	10"	890	800	50	48.68	.32"		2	180	4.45	3.08'
VAV-3	14"	1855	1855	50	88.9	0.13"		2	180	4.61	0.94'
VAV-4	10"	860	860	50	42.5	0.3"		2	180	2.13	0.78'
VAV-5	10"	860	860	50	42.41	0.3"		2	180	2.11	0.77'
VAV-6	10"	860	860	50	42.41	0.3"		2	180	2.11	0.77'
VAV-7	10"	455	455	50	26.3	0.11"		2	180	1.06	0.21'
VAV-8	12"	1485	850	50	53.93	0.49"		2	180	3.79	0.82'
VAV-9	4"	145	120	50	7.05	0.03"		1	180	0.7	.95'
VAV-10	4"	120	120	50	6.95	0.02"		1	180	0.64	0.82'
VAV-11	4"	125	90	50	6.14	0.02"		1	180	0.66	0.85'
VAV-12	5"	230	180	50	11.58	0.11"		2	180	0.51	0.19'
VAV-13	4"	175	175	50	11.04	0.04"		2	180	0.5	0.16'
VAV-14	4"	175	175	50	11.04	0.04"		2	180	0.5	.016'
VAV-15	6"	500	250	50	14.77	0.63"		2	180	0.7	0.33'
VAV-16	6"	430	430	50	25.75	0.47"		2	180	3.22	5.09'
VAV-17	6"	430	430	50	25.75	0.47"		2	180	3.22	5.09'
VAV-18	6"	430	430	50	25.75	0.47"		2	180	3.22	5.09'
VAV-19	6"	430	430	50	25.75	0.47"		2	180	3.22	5.09'
VAV-20	6"	440	440	50	26.22	0.49"		2	180	3.43	5.72'
VAV-21	14"	1955	1955	50	116.61	0.34"		2	180	17.24	11.56'
VAV-22	6"	410	410	50	-	0.43"	-	-	-	-	-
VAV-23	6"	700	700	50	26.1	0.49"		2	180	3.1	2.14'
VAV-24	6"	400	400	50	23.04	0.41"		2	180	1.89	1.96'
VAV-25	8"	725	725	50	21.77	0.26"		2	180	5.42	2.05'
VAV-26	16"	1935	1935	50	124.43	0.29"		2	180	14.16	8.31'
VAV-27	16"	1935	1935	50	124.43	0.29"		2	180	14.16	8.31'
VAV-28	14"	1200	1200	50	90.01	0.16"		2	180	15.56	9.49'
VAV-29	5"	240	240	50	14	0.11"		2	180	0.62	0.28'
VAV-30	24"x16"	2525	1900	50	127.75	0.34"		2	180	10.8	5.22'
VAV-31	24"x16"	2540	2000	50	135.49	0.34"		2	180	13.81	8.25'
VAV-32	14"	1960	1650	50	103.9	0.35"		2	180	12.59	6.33'
VAV-33	10"	1045	1045	50	44.92	0.41"		2	180	2.07	0.74'
VAV-34	16"	905	905	50	38.03	.04"		1	180	1.67	0.99'
VAV-35	6"	425	350	50	23.5	0.47"		2	180	2.6	4.09'
VAV-36	14"	1600	1600	50	-	0.35"	-	-	-	-	-

- NOTES:
1. FAN POWERED BOX SIZES ARE BASED ON TRANE MODEL # VOWF.
  2. PROVIDE ACCESS TO EACH VALVE VIA CEILING TILE REMOVAL OR ACCESS PANELS
  3. BOXES SHALL HAVE MULTI-POINT, CROSSFLOW INLET PROBES.
  4. MAINTAIN 3'-0" ACCESS CLEARANCE PER NEC REQUIREMENTS.
  5. PROVIDE SINGLE POINT POWER CONNECTION WITH FACTORY PROVIDED FUSED DISCONNECT.
  6. VAV COOLING ONLY BOX SIZES ARE BASED ON TRANE MODEL # VCOF.
  7. ALL CONTROLS SHALL BE DIRECT DIGITAL CONTROLS COMPATIBLE W/ TRANE DDC CONTROLS SYSTEM

VERTICAL UNIT HEATER SCHEDULE							
TAG	MANUF. & MODEL	MBH	CFM MAX.	EAT	EWT	COIL DATA GPM	WPD
UH-1,2	STANLEY: HS-118A	15.6	500	73.0	180	1.9	2.2

- NOTE:
1. PROVIDE UNIT MOUNTED THERMOSTAT.

PIPING INSULATION THICKNESS						
PIPING SYSTEM TYPES	FLUID TEMP. RANGE	PIPE SIZES				
		1" & LESS	1.25" TO 2"	2.5" TO 4"	5" TO 6"	8" & LARGER
HEATING SYSTEMS						
STEAM & HOT WATER						
HIGH PRESS./TEMP.	306-450	2.5"	2.5"	3"	3.5"	3.5"
MEDIUM PRESS./TEMP.	251-305	2"	2.5"	2.5"	3"	3"
LOW PRESS./TEMP.	201-250	1.5"	1.5"	2"	2"	2"
LOW PRESS.	106-200	1"	1"	1.5"	1.5	1.5
STEAM CONDENSATE (FOR FEED WATER)	ANY	1"	1.5"	2"	2"	2"
COOLING SYSTEMS						
CHILLED WATER, REFR., & BRINE	40-55	0.5"	0.75"	1"	1"	1"
	BELOW 40	1"	1.5"	1.5	1.5"	1.5"

AIR HANDLING UNIT SCHEDULE																																									
TAG	MODEL	TOTAL UNIT CFM	EXT. STATIC PRESS.	OA EAT		STEAM PREHEAT COIL						CHILLED WATER COIL						HOT WATER REHEAT COIL						UNIT TOTAL COOLING		UNIT TOTAL HEATING	UNIT MTD. GRID HUMIDIFIER	STEAM PRESSURE	LBS./HR.	SUPPLY FAN WALL MOTOR HP	TSP	FLA	RETURN FAN MOTOR HP	TSP	FLA	UNIT VOLTS	MFR				
				SUMMER	WINTER	CFM COIL EAT	COIL LAT	STEAM PSI	STEAM LBS/HR	COIL MBH	COIL APD	CFM COIL EAT	COIL LAT	GPM COIL GPM	COIL EWT	COIL LWT	COIL TMBH	COIL SMBH	COIL WPD	COIL APD	CFM COIL EAT	COIL EWT	COIL LWT	COIL TMBH	COIL WPD	COIL APD	TMBH	SMBH	TMBH	TMBH	TMBH	(9) @ 6 HP	(6) @ 3.0 HP	(1) @ 2.0 HP	(1) @ 3.0 HP	(1) @ 2.0 HP	(1) @ 3.0 HP				
AHU-1	-	30000	2.5"-SA 1.5"-RA	97/66	6.8	30000												30000																							
						6.8	82	15	1529.1	1446.3	0.14"	97/66	48.3/48.2	258.9	46	55	1168.9	1107.7	15.96'	0.72"				50.0	40.9	180	140	796.5	11.94'	0.12"	1168.9	1107.7	2242.8	15.0	1044.4						
AHU-2	-	1940	1.5"-SA .75"-RA	97/66	6.8	2325												2325																							
						6.8	97	15	98.6	93.3	0.17"	97/66	49.6/48.0	14.5	46	55	65.5	65.5	16.36'	0.60"				50.0	2.6	180	140	50.6	3.09'	0.07"	65.5	65.5	143.9	15.0	130.5						

- NOTES:
1. SINGLE POINT POWER CONNECTION.
  2. FACTORY PROVIDED MAIN POWER DISCONNECT SWITCH
  3. UNIT FOR INDOOR INSTALLATION HOUSING TO BE COMPLETELY INSULATED DOUBLE WALL CONSTRUCTION (MIN R-19), S/S INSULATED DRAIN PAN, VERTICAL SUPPLY & RETURN CONNECTIONS
  4. PROVIDE (1) 85K FAN FILTER BANK W/ 85K PREFILTERS ON SUPPLY AIR DISCHARGE OF UNIT TO SYSTEM.
  5. PREMIUM HIGH EFFICIENCY DIRECT DRIVE FAN MOTORS FACTORY WIRED TO (4) FACTORY INSTALLED VARIABLE FREQUENCY DRIVES (2) FOR EACH FAN BANK FOR BOTH SUPPLY AND RETURN (1) VARIABLE FREQUENCY DRIVE FOR DUTY USE AND (1) VARIABLE FREQUENCY DRIVE FOR STAND-BY WITH AUTO CHANGE-OVER IF THE DUTY VFD IS INOPERATIVE.
  6. TOTAL FAN MOTOR HORSEPOWER SHALL NOT BE LARGER THAN THAT SPECIFIED.
  7. ALL UNIT HOUSINGS SHALL BE THE SAME SIZE AS INDICATED ON PLANS
  8. LOCATE HUMIDIFIER CONTROL VALVE AND TRAP, ETC. ON EXTERIOR OF UNIT. STEAM DISPERSION GRID (ONLY) SHALL BE LOCATED INSIDE UNIT.
  9. PROVIDE PHOTOEYES/HD PSES TO MONITOR AIR PRESSURIZATIONS.
  10. EQUIPMENT SHALL BE EQUIPPED WITH FAN WALL II SYSTEM, INCLUDING 0.0" STATIC PRESSURE LOSS BACKDRAFT DAMPER FOR EACH FAN MODULE. EACH FAN MODULE SHALL BE MONITORED BY AN ALARM PANEL MOUNTED ON THE UNIT.
  11. PROVIDE A REDUNDANT DRIVE TO CONTROL FANS IF PRIMARY BECOMES INOPERATIVE.

FAN SCHEDULE									
TAG NO.	FAN TYPE	CFM	EXT. S.P. (")	FAN RPM	H.P.	VOLT/PHS	MANUFACTURE & MODEL		
EF-1	UTILITY	3500	1.0	1638	1.5	460/3	COOK - 165CPV-UB		
EF-2	UTILITY	7475	1.25	1210	5.0	460/3	COOK - 225CPV-UB		
EF-3	UTILITY	400	0.5	2020	1/3	120/1	COOK - 70CPV-UB		
EF-4	CENTRIFUGAL	350	0.5	3702	1/8	120/1	COOK - 90W150H		

- NOTE:
1. COMBINATION FUSED MOTOR STARTER/DISCONNECT
  2. PROVIDE FACTORY MOTORIZED BACKDRAFT DAMPER AND BRD SCREEN FOR ALL ROOF FANS.
  3. PROVIDE MINIMUM 12" HIGH FACTORY INSULATED FAN SUPPORT ROOF CURB FOR ALL ROOF MOUNTED FANS.
  4. PROVIDE ALL ROOF MOUNTED FANS WITH CURB CURB CAP & INLET BOX FOR EXHAUST DUCT CONNECTION SEE DETAIL SHT 48-MS2
  5. ALL UTILITY FANS SHALL BE FOR ROOF MOUNTING FAN MOTOR SHALL HAVE WEATHERPROOF HOUSING.

HEAT EXCHANGER/CONVERTER SCHEDULE	
TAG NO.	HTEXCH-1(DUTY), HTEXCH-2 (STAND-BY)
SERVES	TERMINAL REHEAT BOXES & AHU-1,2
LOCATION	ROOF MECHANICAL PENTHOUSE
TYPE	SHELL AND TUBE, WATER IN TUBES AND STEAM IN SHELL
DESIGN GPM	202
WATER PRESSURE DROP FT	1.06'
STEAM PRESSURE	15 PSI
LBS STEAM/HOUR	4179
WORKING PRESSURE PSIG	125
MBH CAPACITY	2249.8
EWT/LWT	140/180
DIAMETER	12"
NUMBER OF PASSES	2
TUBE LENGTH	3
STEAM JACKET	YES
MANUFACTURER	B&G

PUMP SCHEDULE		
TAG NO.	HW PUMP NO. 1 (PRIMARY & 2 (STAND-BY)	DUPLEX CONDENSATE PUMP #1
SERVES	BUILDING HEATING	BUILDING HEATING
LOCATION	ROOF MECHANICAL PENTHOUSE	ICU TUNNEL LEVEL MECHANICAL ROOM
WATER TEMPERATURE - °F	180	212
TYPE	BASE MTD FLEX COUPLED END SUCTION	DUPLEX STEAM CONDENSATE PUMP
DESIGN GPM	204	45
DESIGN HEAD -- FT	123	--
EFFICIENCY -- %	72.2	----
WORKING PRESSURE PSIG	125	125 PSI
HORSEPOWER	10	5
RPM	3500	1750
ELECTRICAL (V/PH/HZ)	480/3/60	480/3/60
MANUFACTURER	B&G: 1510-2AC	ITT/DOMESTIC #52CBE45-75 DUPLEX
	NOTE: 1,2,3	NOTE: 1,3,4

- NOTES:
1. PUMPS PROVIDED, PIPED AND INSTALLED BY MECHANICAL CONTRACTOR
  2. HOT WATER PUMPS PROVIDED WITH PREMIUM EFFICIENCY MOTORS W/ MATCHING VFD W/ BYPASS FOR EACH PUMP
  3. SEE DETAIL ON PLANS
  4. DUPLEX CONDENSATE RETURN PUMP 45 GPM EACH PUMP @ 75 PSI, 45000 EDR, 11250/LB/HR, (2) 5.0 HP, 480/3/60 VOLTS, 1 1/2" PUMP DISCHARGE, 52 GALLON C.I. ELEVATED MOUNTED RECEIVER (SEE DETAIL), 3" INLET TO RECEIVER, FLOAT CONTROL SWITCHES, SUCTION ISOLATION VALVES, WATER LEVEL GAUGE, INLET STRAINER, DISCHARGE PRESS. GAUGES, PUMP ALTERNATOR SWITCH, LIFTING LUGS. NEMA 2 CONTROL PANEL W/ MAGNETIC STARTERS, BREAKERS AT STARTERS, DOOR MOUNTED POWER DISCONNECTS, SINGLE POINT POWER CONN. H.O.A. SWITCHES, PILOT LIGHTS CONTROL TRANSFORMER, AUDIBLE ALARM W/ LEVEL SWITCH.

AIR DEVICE SCHEDULE		
DESIGNATION	DEVICE TYPE	DESCRIPTION
S-1	CEILING SUPPLY DIFFUSER	24" X 24", SQUARE PLAQUE DIFFUSER, STEEL CONSTRUCTION, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL SPD
S-2	SLOT DIFFUSER	STEEL, (2) 1" WIDE SLOT X 4'-0" LONG, 12"Ø INLET, WITH INTERNAL INSULATION, PATTERN CONTROLLERS, SIMILAR TO PRICE MODEL TBO3100
S-3	SLOT DIFFUSER	STEEL, (2) 1" WIDE SLOT X 4'-0" LONG, 10"Ø INLET, WITH INTERNAL INSULATION, PATTERN CONTROLLERS, SIMILAR TO PRICE MODEL TBO3100
S-4	SLOT DIFFUSER	STEEL, (3) 1" WIDE SLOT X 4'-0" LONG, 12"Ø INLET, WITH INTERNAL INSULATION, PATTERN CONTROLLERS, SIMILAR TO PRICE MODEL TBO3100
S-5	CEILING SUPPLY DIFFUSER	12" X 12" STEEL RISK RESISTANT CEILING DIFFUSER, 4-WAY AIR PATTERN, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL MSRRCD.
S-6	CEILING SUPPLY DIFFUSER	LAMINAR FLOW DIFFUSER, PERFORATED FACE PANEL, CORROSION RESISTANT STAINLESS STEEL, SIMILAR TO PRICE MODEL LFDS
S-7	CEILING SUPPLY DIFFUSER	12" X 12" STEEL CONSTRUCTION, SQUARE CONE DIFFUSER, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL SCD
S-8	SIDEWALL SUPPLY GRILLE	12" X 8" SIDEWALL SUPPLY GRILLE. FORMED STEEL BLADES, 45 DEGREE DEFLECTION BLADES, FIRE RATED ASSEMBLY, SIMILAR TO PRICE MODEL S20.
S-9	SIDEWALL SUPPLY GRILLE	18" X 14" SIDEWALL SUPPLY GRILLE. FORMED STEEL BLADES, 45 DEGREE DEFLECTION BLADES, SIMILAR TO PRICE MODEL S20.
S-10	SIDEWALL SUPPLY GRILLE	6" X 6" SIDEWALL SUPPLY GRILLE. FORMED STEEL BLADES, 45 DEGREE DEFLECTION BLADES, FIRE RATED ASSEMBLY, SIMILAR TO PRICE MODEL S20.
R-1	CEILING RETURN GRILLE	24" X 24", SQUARE PLAQUE DIFFUSER, STEEL CONSTRUCTION, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL SPD
R-2	SLOT DIFFUSER	STEEL, (3) 1" WIDE SLOT X 4'-0" LONG, 12"Ø INLET, WITH INTERNAL INSULATION, PATTERN CONTROLLERS, SIMILAR TO PRICE MODEL TBO3100
R-3	SIDEWALL RETURN GRILLE	12" X 8" SIDEWALL RETURN GRILLE. FORMED STEEL BLADES, 45 DEGREE DEFLECTION BLADES, FIRE RATED ASSEMBLY, SIMILAR TO PRICE MODEL S30FF
R-4	CEILING RETURN GRILLE	12" X 12" STEEL RISK RESISTANT RETURN GRILLE, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL MSRRP.
R-5	SIDEWALL RETURN GRILLE	16" X 8" STEEL RISK RESISTANT RETURN GRILLE, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL MSRRP. BOTTOM OF GRILLE 18" AFF.
R-6	SIDEWALL RETURN GRILLE	10" X 8" STEEL RISK RESISTANT RETURN GRILLE, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL MSRRP. BOTTOM OF GRILLE 18" AFF.
R-7	SIDEWALL RETURN GRILLE	18" X 14" RETURN GRILLE. FIRE RATED APPLICATION, SIMILAR TO PRICE MODEL 80-FR.
E-1	CEILING EXHAUST GRILLE	24" X 24", SQUARE PLAQUE DIFFUSER, STEEL CONSTRUCTION, FINISH: WHITE POWDER COAT, SIMILAR TO PRICE MODEL SPD
E-2	SLOT DIFFUSER	STEEL, (3) 1" WIDE SLOT X 4'-0" LONG, 12"Ø INLET, WITH INTERNAL INSULATION, PATTERN CONTROLLERS, SIMILAR TO PRICE MODEL TBO3100
E-3	SIDEWALL RETURN GRILLE	12" X 8" SIDEWALL RETURN GRILLE. FORMED STEEL BLADES, 45 DEGREE DEFLECTION BLADES, SIMILAR TO PRICE MODEL S30FF

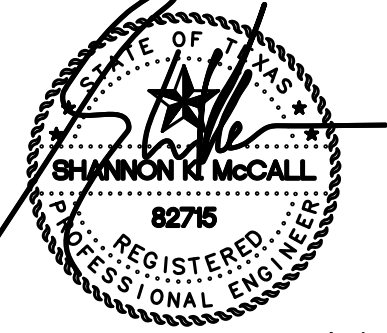
- NOTES:
1. COORDINATE FRAME STYLE WITH ARCHITECT'S ROOM FINISH SCHEDULE.
  2. ALL DIFFUSERS ARE 4-WAY UNLESS NOTED OTHERWISE.
  3. REFER TO ARCHITECT'S REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL DIFFUSERS AND GRILLES.
  4. UNLESS NOTED OTHERWISE, PROVIDE MANUAL BALANCING DAMPERS AT ALL DIFFUSER AND GRILLE RUN-OUTS. PROVIDE BALANCING DAMPERS AT ALL DIFFUSERS/GRILLES WHERE HARD CEILINGS OCCUR.

T

TELIOS

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